THESIS

on

OUR DUTY AS A NATION

TOWARDS THE CHILDREN.

by

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OUR DUTY AS A NATION TOWARDS THE CHILDREN.

One of the most important acts of the present Government has been the establishment of a Medical Department of the Board of Education, to supervise the medical inspection of children at the time of their entry into school and as often afterwards as is deemed necessary - three times at least in their school lives. This inspection will not only look after actual disease, infectious or otherwise, but to the general physical equipment of these men and women of tomorrow.

Having been appointed Medical Inspector to the Perth School Board I propose to write a Thesis on "Our Duty as a Nation towards the Children" and will base my remarks on observations made during the last 20 months while attending the different schools.

It might be argued that the health of the child should be attended to by the Medical Officer of Health, but I am convinced that the School Board, with its large staff of teachers, is more in touch with the children and parents, and therefore in a better position to perform this important/

important work.

At present the Board is only responsible for the child during its school life - that is, from 5 to 14 years - ~~and~~ but the more I see of the children the more I am convinced of the necessity of some form of inspection and supervision of the rearing of infants from their birth to the age of 5. This is the most important period in a child's life, and many a constitution is ruined for want of careful upbringing on the part of the parent.

The co-operation of the Medical Officer of Health and the General Practitioners of the Town is very important and the appointment of Medical Officer of Schools should be held by one who does not engage in General Practice.

Where does all hope for the future lie? With the child. The more vividly, the more enthusiastically we realise this, the more chance there is that Britain may even yet forge ahead of her competitors and take once again her rightful place in the very van of progress.

The child is father to the man, and to the end that he may grow up a healthy man/

man, doing a manful share of his country's workand depending on no one but himself as a man should, every energy we have should be directed.

Who leads the way in caring for her children? Not Britain, but Germany. Let us see what Germany is doing for her little ones, upon whose shoulders thefuture prosperity of their country will inevitably rest.

Education there is free and compulsory, of course, as it is with us, and it seems to have dawned upon the administrative German mind earlier than upon our own that to require children regularly to attend school for nine consecutive years is to shift a large amount of responsibility from the shoulders of the parents to those of the State. Germany is not afraid of the logical results of her actions. She assumes those responsibilities expensive as they are, with a cheerful mind, and the first out-come of this sense of her responsibilities has been the school doctor.

UNDER THE DOCTOR'S EYE.

In Germany, before a child can enter an elementary school, he must be examined by the school doctor. This examination

is/

is thorough and exhaustive, and takes cognisance of the heart, lungs, spine, skin, eyes, ears, nose, nervous and alimentary systems. Should it be necessary to exempt a child from special lessons, such as bathing, singing or physical drill, he is exempted. Should he require special treatment at school, it is secured for him. Should it be desirable to excuse him from school attendance altogether, he is excused. Should it be necessary to provide him with spectacles, a special seat, in some instances special feeding, he is so provided.

Records are kept of every child's height, weight, and chest measurement. Unsuspected weaknesses are detected and remedied. Incipient disease is discovered and warded off. The kindly eye of the doctor follows every youngster during the whole of his time at school, and on his leaving it is by the advice of the doctor, who has for his guidance an exhaustive record of every variation in the child's health during nine of the most important years of his life, that his future career is chosen.

NOT THOROUGH ENOUGH.

Where in Britain will you find anything/

anything like this? Tentative experiments in the direction of the medical inspection of schools we have made, it is true, already here and there, and Mr McKenna's Bill for the Medical Inspection of School Children in England and Wales is now law in England . But will it be carried out with German thoroughness? Will it, say within the next five years, be possible to go into any elementary school in England or Wales confident of finding the health of every individual child carefully watched and accurately recorded?

I doubt it. Even my suggestion that such a state of things is desirable will be greeted with derision. Yet what Germany can do for her children surely we can do for ours. Unless we are resigned to drop hopelessly out of that race which is to the strong and to them only, the sooner we set about doing it the better.

And this is not all that Germany does. Thanks to the institution of the School Doctor the "Town Fathers" are accurately aware of those little ones in their midst whose bodies are wizened and faces pale. Every now and then these children, who, without/

without such fostering care, would inevitably grow up wastrels or worse, are collected into happy little batches and sent off to the sea. If their parents can pay any part of the expense they do so, if they can't the Town Fathers (happy designation) cheerfully supply comfortable outfits, and not cut on a Charity School pattern, either.

For weeks at a time these children romp on the sea-shore and grow brown and rosy at the town's expense, for well the town knows that money so invested yields a heavy interest later on. A healthy child is a valuable asset to the State, and well worth the State's manufacturing. So argues Germany.

It is not only the health of the children that is closely watched. Germany is on the lookout for talent also. If any appear it is fostered. Should a child show dexterity in wood-carving, lessons not likely to be of use to him are eliminated from his school course and all his energies given to the development of his speciality.

Does he handle his paint brush more artistically than the general? The news quickly/

quickly reaches the ears of those able to help him, and they see that the best instruction obtainable is afforded the budding artist. The same if a child shows musical capacity. Who pays? The town pays. They understand, in Germany, the value of the raw material.

EDUCATION MUST CONTINUE.

And what about those three dangerous years between 14 and 17 after a child has left school? Here it depends all too often upon a child's own wishes whether its education is continued or not, and few children are endowed by nature with that unquenchable thirst for knowledge which would lead them to prefer lessons to play. In Germany the child is not consulted. He is compelled by law to attend either a Continuation or a Technical School for six hours weekly up to his eighteenth year, and his employer, if he is at work, is bound to see that he does so.

It is a most salutary enactment in that it provides for both boys and girls just that element of supervision so unquestinably necessary at the crucial time of their lives. The schoolmaster is still in authority. The School Doctor can still/

still be called in should his services be required. More than all, developing youth feels that its present and its future are matters of serious moment to those in authority over them. And it is not a few, and those among the best, that are watched over and guided across that perilous bridge between childhood and manhood on which so many of our own slip and go down into deep waters. Not a few - but all of them.

We are faced with the absolute necessity of ameliorating the conditions of life for the poor. It is ardently to be desired that we begin at the right end, and to begin at the right end is to begin with the child. We are doing ~~much~~ much for him, but it is not enough. On us it rests to see that every child in the kingdon grows up duly equipped for the battle before him, that we render him, as far as in our power lies, a healthy and a happy child, since to make him happy is to make him good. If I am asked who is to pay for it all, I answer without hesitation that we must - we, the nation as a whole.

PAUPERISATION A BOGEY.

Let us put aside the bogey of the pauperisation/

pauperisation of parents. It is a red herring trailed across the path of progress. What does it matter if we do make paupers of a few wretched parents in this generation so that we raise up young men and maidens who will not be paupers in the next?

It may be said that this would relieve the unwilling parent of his responsibilities, but we must not sacrifice the child for the sake of teaching a moral lesson to the parent. One thing is certain, and that is that the State will have to pay for him at the beginning or at the end of his career, and that it will be cheaper to pay for him at the beginning and so give him a chance of becoming a source of strength, and not a burden, to the country.

Again it may be argued that it would break up home ties which are so sacred to the heart of a Scotchman but greater benefit is to be gained by breaking up the families where vice is the main element. I believe that the future of the country depends entirely on the children. It is not possible to influence men and women grown up and who have got into a definite habit/

habit, but with the young body and brain still undeveloped all possible reforms could be started and carried through. I believe that deepest in the mind of healthy men and women is the love of children and although it might add a little to the rates it would never be grudged so long as we were taking the children from a bad atmosphere and promoting both physical and spiritual health and as a result a well-developed and well-educated future generation.

TO SAVE THE CHILD

A National Conference on Infantile Mortality was held in London last year and from the influential position occupied by the speakers one would fain hope that their arguments might take effect in the proper quarter. The gravity of this, the most difficult of all social problems is everywhere recognised. Not only is the death-rate among infants high, but it is due to causes which, in addition to killing so many children, so attack and undermine the constitutions of the survivors that they become a burden to the State. And not only are they a trouble to-day, but a source of grave apprehension/

apprehension for the future. It has been well said that the quality of motherhood is the dominant factor in the problem and not poverty, and that the crèche and the milk depot, both excellent in their way, must be inferior to such remedies as schools for mothers. The gross ignorance shown regarding the upbringing of children is appalling. When one remembers also the misconduct, the callous indifference, and the neglect which is so prevalent in every large town, need one wonder at the high death-rate among infants and the amount of suffering among those who survive.

If there is one thing more striking than another in connection with the problem it is the agreement among all who have studied it that drink is the most prolific cause of infant mortality. A well-known physician has said that fifty per cent. of the children of drunken parents are dead-born or die within the first year, and of the survivors 12 per cent. are "possessed" of epilepsy. Of course, it may be useless to advise care as to the selection of one's parents. Dr Stanley B. Atkinson, a member of the Central Midwives' Board/

Board, says in some cases it would be wise to exercise more care in choosing parents-in-law, and quotes the words of Oliver Wendell Holmes that "the time to commence the education of the child is twenty years before it is born by educating its mother." But are we so helpless as some people would make us out to be? Can we not, for instance, stop the sale of drink to women who are nursing children? Can we not banish from the street the saddest of all sights, the child running to the public house for drink to the parent? This is no question of the liberty of the subject. It is the very least that the nation can do to protect the infant and save the mother from degradation. At present the law punishes the publican who sells drink to an intoxicated person. Why not forbid him to serve the woman with an infant in her arms or the barefooted child that acts as her emissary?

EMPIRE BUILDING.

A glance at the children examined from day to day led me to the conclusion that in a great many cases the individual effort/

effort in the feeding of infants has failed and that the sooner this duty is done collectively the better. A great deal of the money spent on education is lost owing to the child being in a weak state of health and unable to profit by the instruction given.

We may depend upon this, that had the individual efforts made for the education of children in the first half of the last century succeeded in getting those children educated there would have been no Education Act of 1870. That Act was passed amidst universal approval because individual effort in education had failed. If the demand for the collective feeding of children is to-day growing in force and volume, ~~as~~ it is because more and mpre of us are coming to recognise that individual effort in the feeding of children has failed too, and because more and more of us are coming to believe that an empire of men and women who have been well taught and well fed in their early youth will be a more lasting empire than one in which the children went to school with empty stomachs and wet feet.

MEDICAL EXAMINATION IN INFANT SCHOOLS.

The medical inspection of infants is likely/

likely soon to assume great importance. It is at these ages that slight defects or diseases have such a profoundly modifying influence on the future, and it is of especial importance to have children examine d at the ages of from three to five years to detect the beginnings of diseases, such , for example, as tuberculous bone and joint diseases, which if not caught early result often in producing permanent injury or crippling."

The effect of environment on the children is most striking. The children of the well-to-do artisan are often over-clothed, coddled and unexercised and suffer from enlarged tonsils, adenoids and anaemia while semi-starvation and filth are a fruitful cause of corneal ulcer, marginal blepharitis and early ophthalmia and otitis.

I would like to point out the great importance of medical inspection for children like these, checking as it will at the outset such lesions. Careful supervision by the teachers who communicate with the parents have already led to great improvement in the condition of the children.

I attribute a great number of the cases/

cases of diseases of eyes, nose, and ears in the schools to dirty conditions which the parents in many cases do not choose to remedy. I consider that the remedy for these dirt inflamations in debilitated children in slum schools is, in many cases, their removal to a different environment, such as a residental country school. This , of course, at present is impossible to carry out, and the immediate remedy is the introduction of hygiene into all training colleges and schools. If the hygienic conscience of the teachers is once aroused they may be trusted to use their influence upon the children and through them upon the parents. There has been much discussion as to the wisdom or unwisdom of receiving infants of three years and upwards at school. I think it is virtually important to examine children as early as possible, so as to detect the beginnings of disease. On the other hand, medical officers of health argue that infectious diseases would be considerably reduced if the children were excluded from school until they were older. Against this must be put the fact that children play together in the streets/

streets, and that infectious diseases would spread in that way.

It is also argued that these infants cost the State large sums of money, while the education they recieve is so unsuitable that it seriously harms them. There has been an endeavour in the past to force work out of undeveloped or non-existant organs. I have seen babies forced to do needlework, writing, and drawing to the injury of their eyes, their spines, their nerves and their brains. Gradually an improvement is being effected and needlework has already been eliminated. If these children were excluded from school some other provision must be made for them by the State. Many of the mothers are out at work and if the infants were kept at home it would mean that the elder sisters would have to miss school in order to mind them. They could not remain in the streets so that kindergartens or creches would have to be provided at a large expense. The most suitable plan, then, is to create school conditions which will benefit instead of harming these small children. I believe that far more important than the university/

university professor, who is commonly looked upon as the most important personage in the educational world, is the teacher of infants. The wise handling of undeveloped children is of paramount importance.

When the body is deformed and undeveloped by cramped positions, when the sight is injured by fine work, and the brain during its growing period is strained and weakened, it is too late to undo these evils by passing the child on to more and more qualified teachers. I hold that the most careful attention should be given to the selection and special education of infant school teachers. How many of the women in charge of these departments really understand the child brain? how many realise the importance of coarse movements and the danger of fine work, the necessity of free movement as oposed to cramped, unnatural positions? That they should consent to be in charge of an infant department in which galleries take up most of the floor space is a very bad sign, for no matter how suppressed and downtrodden the teacher may be, no competant person could conscientiously hold office without protesting/

protesting so persistently that the conditions must be remedied. Now that a medical department exists at the Board of Education, it is to be hoped that this most important question will be gone into.

The best investment of pub lic money will be to provide for the leisured training of specially selected women as teachers of infant schools, the proper equipment of these schools with small movable tables and chairs in an adequate-sized room, and careful medical inspection of the children. Thus, instead of passing into a class of dullards, and probably ending in a school for defective children, a physically and mentally healthy class of children will be passed into the boys' and girls' departments, and may be expected to turn out useful citizens instead of peopling our prisons and workhouses.

THE TRAINING OF TEACHERS.

Medical Inspection to be effective must be followed to its logical sequel and this can only be accomplished by the co-operation of the Teachers. The teachers must be instructed in Hygiene and the

common/

common symptomsassociated with children's diseases. The Teacher should be able to call the Doctor's attention to the children who sit, breathe, or speak improperly. The Doctor having pointed out the defect or disease, the teacher should see that the parent carries out instructions and be able to report to the doctor if there be ~~is~~ any improvement in the child's condition. During the last 20 months in Perth 575 notices were sent to parents pointing out different pathological conditions from which their children were suffering and it will be my duty on examining these children again to see how many notices were attended to. It would have been of great benefit if the teachers could have seen that instructions were carried out at once and to report to me every time I visited the school.

We must bring the home more in touch with the school and the mothers with the teachers. To do this smaller classes will be necessary and make the teacher responsible for every child under his or her care.

Lectures on Hygiene should therefore be made compulsory in teacher's training colleges and preference should be given to/

to teachers who have passed in Hygiene.

At present this difficult question is being dealt with by the London Educational Committee but the most progressive country in this respect is Bulgaria. It is sad to think that the teachers of elementary schools, drawn as they are from the elementary school class and emerging from elementary schools are as sickly and unfit as the children they teach. This tends to unhealthy toned schools and if a large proportion of the teachers and children are ailing the best work can not be produced. Under the system in Bulgaria of daily medical inspection of students, the unhealthy are singled out while less work is expected of those who are temporarily debilitated. The consequence is that by the end of the training course men and women sound in mind and body are turned out to teach in the schools and give the classes they are in charge of a healthy tone. It is melancholy reading in Dr. Kerr's report to see that of 2,052 candidates for junior scholarships in London, 712 were referred back or absolutely rejected on medical grounds, proving as it does that the/

the children's brains are being exploited at the expense of their health.

TRAINED BODIES FOR TRAINED MINDS.

It is well known that contestants for athletic honours in many colleges are required to reach a certain grade in scholarship, but the contestants for honours in scholarship, as a rule, have no physical requirements made of them. The prizes for scholarship may be given to pale and underfed "grinds." Dr D.A.Sargent, the director of the Harvard gymnasium, recently made this difference a cause of complaint against the colleges. The notable thing about such a criticism is that it should, in this broad daylight of physical knowledge, be necessary to make it at all. A pale, stooping, flat-chested, soft lad ought not to receive honours of any sort from a British college; for, without enough physical training to keep him erect and to give his body the normal strength, no lad can be truly educated. In a most serious sense he is mistrained.

The worst of the continued toleration of mere book-work by underfed and under exercised youths is that many of them, unable/

unable to win success in the more active world, become teachers and finally members of college faculties, and perpetuate the same type of scholars.

Competition is to-day the arch-enemy of all true culture, mental as well as physical. See how it affects the scholarship men and athletes in our colleges and universities. Harvard offers at the present time about £20,000 annually in some three or four hundred scholarships ranging in value from £30 to £100 each. Any student in need of financial assistance may apply for one of these scholarships, provided he has no physical, mental or moral weakness, and gives promise of future usefulness. After a student receives a scholarship he is advised to consult the director of the gymnasium in regard to his health; but the factor over all others that determines whether a given student shall receive a scholarship is not health or physical vigour, but his mental standing according to the rank book of the faculty. In answer to the question which I usually put to scholarship men, as to their/

their reasons for not giving more attention to their physical improvement - the almost invariable answer is "I haven't time." Back of this reply the careful observer may read in their sad but determined faces the dread uncertainty and constantly harrowing fear lest while they take time for physical exercise, recreation, and enjoyment, their nearest rival may be at the everlasting grind ~~and~~ that will land him a few points nearer the desired scholarship goal.

This is not education, whatever else it may be. The Greeks knew better than this thousands of years ago.

And take warning from our own profession. How many of our best students have succumbed or had to give up practice because they were physically unfit to carry on the struggle for existence? I can remember a fair number of brilliant men in my year who have either died or been unable to practice owing to ill-health brought on by overstudy.

"HYGIENE AS A SCHOOL SUBJECT IN ELEMENTARY SCHOOLS.

The goal of hygenic teaching and training/

training is to establish hygienic habits. To this end teaching is of little value, especially to those of 14 years of age and under, as compared with training; and if we could secure a skilled training in hygienic observances throughout the school age and, in those cases where it appears to be necessary, could supplement the school influences by an effort to improve the home conditions, I believe that the results would lose little in comparison with those obtained if set teaching were added to the simple scheme which I advocate.

I am of opinion that for the purposes of elementary education there is no need to treat hygiene as a set subject; the practice and precept of hygiene should permeate the whole school curriculum. To treat it as a set subject upon which, say, two hours a week of teaching are to be bestowed will, in my opinion, be pretty sure to lead to poor results. The question then becomes, What is the scheme for obtaining the best possible results under the conditions imposed by the already crowded syllabus and the early ages of the scholars? Train the children in cleanliness and self-respect, inculcate the fresh-air/

air habit, and teach the elder girls something of the care of babies and of simple cooking, and there is little more that elementary education need provide in the cause of hygiene. Therefore the scheme which I would advocate for boys and girls alike would embrace the following items. 1. The importance of fresh air and how to obtain it. 2. The importance of cleanliness of person and surroundings. 3. The healthy maintenance of certain bodily functions and the formation of hygienic habits. 4. The dangers of contamination of water, air, and food, and how to guard against them in the home. 5. Temperance in all things. 6. (For girls) The elementary facts of the care of infants and the selection of food (marketing, &c.) and simple cooking dealing only with the preparation of simple dishes by the simplest means).

The scheme would be in operation throughout the whole school curriculum, and any conversational digressions or short oral lessons would be carefully graduated so as to appeal to the different standards.

The/

The education of girls under the suggested scheme is carried further. This extra education (vide Item 6) should be confined to the last two standards, and here in my opinion, some set teaching is necessary. The teaching should be simple and practical, and here also all but essentials should be ignored; but if good results are to be obtained facilities must be provided on the school premises for the practical application of what is taught. For instance, simple cooking with simple materials, the handling, dressing, clensing of, and the preparation of suitable food for the baby must be performed by the scholars as practically as possible. The cooking lessons should include occasional commentaries upon the relative food values, digestion, nuitrition, &c., of common foodstuffs. Room will have to be made for this set teaching and practice, and to that end I would suggest that it would be very little (if any) loss to the girls if "geography" were allowed to drop out of the last two standards.

EYESIGHT.

The power of observation as distinguished from mere seeing is developed to an exceedingly variable degree in different individuals and classes as a result of training.

Examples of such differences in trained powers of observation might be multiplied indefinitely, but mention need only be made of the sailor's superiority over the landsman in detecting distant ships or lights, and the countryman's sharpness in picking out from afar off individual persons or animals.

In speaking of such visual qualifications it is usual to refer to them as the result of training the eye, and for ordinary purposes this may be enough. It must be remembered, however, that the eye does not perceive. Pictures are formed in it, and they are interpretated by the brain, and the differences as regards power of obse rvations between two persons each of whom has normal eyes is not due to difference in sharpness of eyesight, but sharpness of brain power to interpret what/

what is seen equally well by both.

When we think of the adult's visual perspicuity and its apparent relation to training and environment, an important field of enquiry, it seems to me, is suggested for the educationalist. First, can it be shown that children vary in acuteness of visual power according to their environment? Secondly, if they do, can anything be done for them at school?

In attempting to answer these questions I wish to bring forward evidence obtained in my work. During one session I investigated the eyesight of the children above the infant department stage in all the Board schools. The number of children examined was 4,293, situated mostly in working class districts in all stages of prosperity. The first examination was made by the teachers, and those children whom they found to have defective vision were referred to me for further investigation.

The result of this testing by the teachers was that 35 per cent. of the children were shown to have defective vision in one or both eyes. I examined these/

these children, and found that many of them, although unable to see well had nothing apparently wrong with their eyes. They had neither evidence of ocular disease, nor were their eyes long sighted, shortsighted, or astigmatic. Moreover, their vision could not be improved by the use of glasses. It seemed as though their visual difficulty was entirely functional, and while the acuteness of vision was in most cases moderately near the normal standard ($\frac{6}{12}$ or $\frac{6}{18}$) in not a few the depreciation was extreme ($\frac{6}{36}$ or $\frac{6}{60}$). The proportion of the total number of children who were only functionally defective was 14 per cent., but as different schools had different percentages, I made an analysis of the results with a view to finding any suggestive circumstances associated with their distribution. I constructed a chart in which the individual schools were arranged according to the percentage of defectives found by the teachers, and in which, also, were indicated by a second line the percentages found defective by me. The space between these two lines gave for any school the percentage of functional/

functional defectives - that is, those whom the teachers found to have defective sight, yet whose eyes I found to be normal. Now, the teachers' line began very high (53 per cent) and gradually fell to 20 per cent. in the different schools. My line moved within the limits of 28 and 16 per cent. To put it in another way, the proportion of children whose defective vision could be improved by the wearing of spectacles was nearly the same in all the schools, but the proportion of those who had functional defective vision and did not require glasses, varied within the wide limits. It was a striking fact that the school at the high end of the chart line, with 25 per cent. of its numbers thus functionally defective was situated in a poor district in the middle of the city, while the school at the other end with but 3 per cent. functionally defective was right on the city's edge within sight of the open country. And that this was no mere coincidence was indicated by the fact that most of the city schools had the highest percentage of functional defectives. I next arranged the schools in city districts, and compared the aggregate results/

results. The result was the same - the nearer the district to the open country, the smaller the proportion of its children who were functionally defective. Further I examined the children of a country school and found them much superior visually to the best of the city schools, and of the two, the agricultural school had the smaller number of children functionally defetive. There thus seemed to be clearly indicated a definite relationship between district of residence and visual acuteness, apart from optical defect.

Why should a child who has perfectly good eyes see so much worse if he stays in a street in the middle of a city than if he were a country child, or even a suburban child? It would be very difficult to make a complete reply to this question, because there must be many casual factors, but some of these are demonstrable. The social status is undoubtedly one cause, for the visual standard in slum districts is the lowest, and it is highest in the best class schools. But the best class schools are those nearest the edge of the city, and inasmuch as country school children see best of all, the comparative openness of the best class school/

school districts probably has something to do with their superior vision. That it is not the whole cause, however, is shown by comparison of city districts equally remote from open country, but of different degrees of prosperity which shows a decided visual advantage in favour of the better off children. It may therefore be safely asserted that the poorer a city child's circumstances are, and the more closely built his district is, the less likely is he to have sharp distant vision; but to attempt to apportion to those two conditions their relative causal values is hardly possible in the present state of our knowledge. It is true that I have found that the poorest country children have excellent distant vision, but it would not be fair to say that that is entirely due to their being accustomed to look long distances, because even the poorest country child is physically very superior to his brother of the slums. His food is usually wholesome, his surroundings more healthful, and his general nutrition is much more satisfactory, and, of course, his eyes and brain share in the general wellbeing/.

wellbeing.

Again, working-class children who live near the city's edge see better than those who seem to be equally well off, yet stay in densely built parts; but the very proximity to the country must have some influence on the general health, so we are not entitled to say that visual superiority is entirely due to the greater scope for practising distant vision. We must, therefore, leave these two causal factors linked together in our affirmative answer to the question, Can it be shown that children vary in acuteness of visual power according to their environment?

Passing now to the second question, Can anything be done at school to improve the poorer city child's vision? I think an affirmative answer may again be given. First, attention ought to be paid to the fact that these children are habituated to a short range of vision. They live in closely congested districts; their playground is the street or a small backyard. They rarely have occasion to look any considerable distance, yet up to the age of 7 or 8 a child's eyes are structurally better/

better adapted for distant than for near vision; indeed, peering at close objects involves the eye in an amount of accomodative strain which is apt to produce permanent bad effects.

Now, it is well recognised that children in general should not be called upon to use their eyes much for near objects while at the infant department stage. Surely, then, in the case of the poorer city children it is not only imperative that they should not be made to strain their eyes poring over minute work, but an effort should be made to train their sharpness of vision for distant objects. Focussing for near objects means the exercise of muscles in and round the eye. Looking at distant objects - provided the eyes be normal, or, if abnormal, fitted with glasses demands little, if any muscular exercise. The former produces exhaustion and possible permanent harm; the latter may weary the child if continued too long; but the symptoms of this are abvious to the teacher, and no permanent damage is done. Sewing should certainly be/

be abolished as an item of the infant curriculum. Most of the teaching should be done by means of objects, figures, and letters which are large in size, and placed at a distance from the pupils. All writing and drawing by the pupils should be on a large scale, and consequently any ruled paper which is used should be as widely spaced as possible. Further, I would deprecate the use of small multi-coloured squares of cardboard, with which I have seen children building up patterns, to merely look at which caused discomfort in the eyes. I am confident that good might be done by the institution of competitive games, which would involve the use of the eyes for distances of 20 ft. and over. Objects or pictures should be momentarily displayed to a class, then descriptions asked of what was seen. The complexity of the picture or object would vary according to the ages and progress of the children, also the time of exposure. On such a principle a great variety of games might be arranged and an improvement in two most important attributes - namely/

namely, sharpness of distant vision and quickness of observation - would result, which would amply justify the trouble involved.

So much for trying to counteract the visual disability of poorer city children in so far as it results from their habitual limited range of vision. The other casual factor which is suggested by my observations is the general nutrition of the child. This must be largely dependant upon the atmosphere in which the child lives and the nature of the food which he receives. Most teachers of experience are decided in the opinion that it is not the amount received by the children of the poor which is so much at fault as the nature of it. The same money might be spent so much more judiciously.

In conclusion, let me recapitulate. The poorer city children are liable to have functionally defective eyesight - that is, a defect of sight which is not due to any physical abnormality of the eyes, but seems to be due partly to want of training and partly to malnutrition. The effect of the want of training might be/

be, to some extent at least, neutralised by certain modifications of the infant department curriculum at school, notably by abolishing sewing and all forms of work which require close poring over, and by instituting suitable visual exercise games. The effect of malnutrition might be combated by proper feeding during school life, as I have found it to be in the industrial schools which I investigated.

BREATHING.

A child that stoops and stands and sits with hollow chest is closing up the breathing organs, contracting then daily and weakening them until they grow smaller or diseased from lack of use. It is quickly noticeable when a child is breathing properly or not. Many a child that is considered dull and stupid in school is only dull because it is using half the motor power of its lungs, and an increase of circulation gained from using the lungs correctly will put the child from the foot to the head of the class.

Superficial breathing or the use of the smallest part of the lungs only is like using a small part of the machinery to do the work of the whole. The part used has twice the amount of work put upon it, and performs it inadequately and at the risk of wearing itself out, while the parts unused are apt to atrophy. Especially does a little girl need more attention to her breathing because she is more apt not to stand properly.

THE EXERCISE OF THE FUTURE.

The most striking feature of the exercise/

exercise of the future will be that it is for all, not for a comparatively small section of the people. True, there will be many differences between the exercises of one age, one group, one class, and those of another age, group, and class. But there will assuredly be a common foundation. This foundation will include the correct way of breathing, standing, walking, running, swimming, sitting, lying, relaxing and so on. For example, instead of the development of one and only one, way of breathing, as if this were the only way, everyone who does not naturally breathe well will be taught the way to use and train the various breathing - lower, middle, and upper - till the right way becomes automatic. At present only a few breathe satisfactorily. These are, for the most part, those who breathe satisfactorily by the light of nature without any special teaching, the rest are apt to learn some one-sided system or else go on in their perverted habits. In the future the authorities - and through them the parents and schoolmasters and schoolmistresses - will teach children not only to breathe properly/

properly but also how to stand so that the chin will not poke forward nor the spine be abnormally curved (partly through the habit of lopsided standing and sitting) nor the abdomen be projected and so on. They will teach children how to walk and how to run with free and direct steps, and with the minimum of energy and the maximum of grace. They will teach children how to swim making them first master the movements of the breast-stroke on land.

Another important problem is voice production. A large proportion of the teachers suffer from chronic laryngitis solely on account of defective use, of the vocal cords, the tonsils become enlarged and congested and the voice unharmonious. The child picks up the habit of the teacher to the detriment of its health.

MENTALLY DEFECTIVE.

Congenital mental defectives are not entirely a product of modern civilization; there can be little doubt, however, that in recent years ~~those~~ their numbers have increased out of reasonable proportion to the ordinary population. This is probably the real reason why public attention has at last been focussed upon them.

Increasing experience would seem to show that there is no single sign on which a diagnosis can be based; for this purpose both an intellectual and a physical examination are necessary, together with an investigation of the attitude and demeanour, and an enquiry into the conduct and mode of life. In many cases the ~~ex~~a mination can be much curtailed, only a few intellectual tests being required. The omission of any of the means for detection, however, always involves a possibility of error; for instance, a few days ago a boy of 5 was brought to me; he answered questions pretty well for a child of his age, and showed but little sign of abnormality; I was, however, informed that he was dirty in his habits, and could not be broken of this/

this. As he was in a well regulated institution, and had been there much longer than is generally necessary to put all right with normal children who are suffering from neglect, this fact had much significance. Again, it is a matter of ~~much~~ common knowledge that children are sometimes branded as feeble-minded when they are only deaf or short-sighted; the same mistake may be made with children of 10 or 11 who cannot read or write because they are suffering from such a condition ~~of~~ *as* cardiac disease which has involved never going to school.

The examination must be adapted to the age of the child. Reading and writing are, of course, important tests, while the power of calculation must be carefully apprised. Arithmetic is a great stumbling-block to weak brains, but alone does not constitute a sufficient test; those who are very weak in other directions are sometimes surprisingly quick at figures.

Backward children, who suffer entirely from neglect and an abnormal environment, but are not really defective, are not very uncommon in these days when parental responsibilities are so readily undertaken

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by the State and charitable people. If the father drinks and loafs, and the mother goes out to work all day, leaving the children shut up in a back room with no food, and without a fire, for fear of accidents, it is little wonder that the offspring fall greatly behind the standard of more fortunate children. This type, when properly fed and placed in a more stimulating atmosphere, soon responds to educational influence.

In the case of children under 7 an intellectual test is of comparatively little value; a history of dirty habits, and of backwardness in walking and speaking, counts for much. An exact history is of real value in prognosis, for Lapage, after examining over 300 cases, was able to demonstrate that the later the child learns to talk and walk the greater is the degree of mental deficiency. The defective child is slow in learning to sit, to hold up his head, or use his hands. In infancy want of muscular power in the lower jaw often makes it impossible to take hold either of the breast or the bottle. When, in addition to signs such as these, the cranial configuration and features clearly conform

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to one of the recognised types of congenital mental defect, such as the microcephalic or Mongolian, a diagnosis can be made at a very early stage; if there is the least doubt, the decision is better deferred till the child is 7 years of age.

In all cases a study of the attitude and demeanour gives great help; a feeble-minded child seldom carries himself well. When a group of children is marched past, those who are mentally defective can often be picked out immediately by their evident lack of spontaneity and vitality, and also of muscular power and control. Even with adults ~~and~~ the weaklings can often be recognised in the same way. The face should be carefully watched, for defects of expression are common; it is difficult to describe or classify the deficiencies, but with practice they can often be recognised. During an examination sometimes more importance must be attached to the manner of the suspect when questions are asked, rather than to the actual answer. The power of attention is an important point; its duration and intensity greatly influence the prognosis. In some instances it is impossible to come to a decision without

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an account of the habits and conduct; if these cannot be supplied from a reliable source, it is well to place the child or young person for a few weeks in an institution; where he can be under the eye of a competant observer; under such circumstances his real capacity soon declares itself.

In discussing the physical examination it is necessary to deal first with the stigmata of degeneration. At one time there was a tendency to think that one or more of these would constitute an all-sufficient test. Careful investigation has, however, shown that they may be present in normal individuals, while defectives may be quite free. Lapage made a careful investigation in Manchester of 250 defective children and found that 90.5 per cent. showed some well-marked physical anomaly. This confirms the observation, frequently made, that the more common abnormalities are twice as frequent among the feeble-minded. Lapage, however, found that the distinguishing feature between an ordinary school child and a feeble-minded one was that the anomalies in the former/

former tend to be single, while in the latter they are usually in combination. My own experience would amply confirm this. The stigmata to be looked for are irregularities and pecularities of the ear, of the teeth, face, tongue, cranium, and hand. An epicanthic fold is not in itself of great significance; associated, however, with a small and oblique orbital fissure, a transversely-furrowed tongue, or some other distinguishing feature of the Mongolian, it carries full weight. I have already stated that there is no one diagnostic sign; a possible exception to this rule exists in the case of a small head circumference. Normal school children with a measurement of less than 19 inches are very rare. All the same a typical microcephallic is a person with a head of a characteristic configuration rather than of a special size, the distinguishing feature being the two pointed angles at the nose and vertex, due to the absence of chin and the rapidly receding forehead. Excessive size of the head is also suggestive. There is no difficulty about putting a tape round the widest part of the head,

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and this should always be done; antero-posterior, transverse, and other diameters can be readily taken with a special head spanner or a pair of callipers, but are not usually necessary for an ordinary examination. Marked asymmetry should always be looked for, also a high arched palate. Having thoroughly examined the head, the hand should be placed under review; a little finger falling short of the distal interphalangeal joint of the fourth has sometimes been accounted a sign of considerable importance; after examining a large number of individuals, normal and defective it appears to me that while of some value in association with other abnormalities it is no guide whatever as a mark by itself. The appearance of the whole hand should be noted; the little broad hands with short squat fingers, often characteristic of the Mongolian type, being decidedly suggestive. The state of the skin should always be noted; it is frequently dry and scaly, or even eczematous and often there is a growth of hair in abnormal situations.

The special types into which defectives are/

are often divided, such as macrocephalic, microcephalic, Mongolian etc., are largely matter of academic interest; the practical point in connection with them is this; if a child has such a combination of distinctive features as will assign it to one of these groups, no doubt is left as to the want of mental capacity. Special classification therefore, is not without value, especially as I believe it often gives a clue to the predominating cause.

No examination is complete without an investigation of the other organs, and especially of the heart. I have already alluded to the possibility of apparent mental defect being due to serious cardiac mischief, which has prevented any education. The heart is often diseased in defectives; indeed, this is one of the reasons why their careers, as a rule, are comparatively short; 40 is a limit beyond which most defectives never go. Barr collected records of 625 cases, and found that only 8 of them, or little more than 1 per cent., survived 40; more than half the whole number died between 10 and 20 years of age.

Turning/

Turning to education, it may be said at once that practically nothing can be done with idiots and imbeciles; with those of a higher grade the first point is to make sense impressions and arouse attention; objective methods are of paramount importance throughout; the pace must always be exceedingly slow. The great essential for success is that the teacher should adopt Froebel's motto, and "live with the children". School work must not be attempted till 7 years of age, and as the large majority, if not all, of this class stop developing at 16, in marked contradistinction to ordinary individuals, we may well exclaim at the limited time in which we have to work. Before 7 the time must often be occupied in training to cleanly habits and in developing functions which the normal acquire almost of themselves. If there are defects of speech they must be dealt with in the ordinary way by teaching first abdominal breathing, and following it up with ~~the~~ tongue drill; to start by calling upon the child to pronounce difficult words or combinations of words is but to court failure. When the very elements of sound/

sound are a stumbling-block great patience is necessary; making the vowel sounds to music acts as a useful stimulus in certain cases. If learning to walk is such a laborious task as to tire out even the mother's patience something may be achieved by placing the child in a square frame on wheels with a hand-rail.

As regards school work, when there is but little capacity, the less time spent with books the better. To be able to read, is, however, such an incalculable advantage to every individual, that as long as there is any hope great efforts are legitimate. Wherever possible, too, every one should be taught the name and value of the various coins especially the less valuable ones. Having achieved this, the sooner attention is devoted almost entirely to manual work the better. It must never be forgotten that the education of the power of attention is of paramount importance. With this object tasks and lessons must be made as interesting as possible. By means of manual work not only does the defective learn to contribute to his own support, and that with considerable satisfaction to himself, but also

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some of the best avenues to the brain are opened up. Till recently America has been far ahead of this country in the practical instruction provided for degenerates. During the last year, however, Mr. Burden, assisted by Mrs Hume Pinsent, has set a splendid example in the arrangements of the work at the Boarding school at Sandwell. Gardening, carpentry, bootmaking, brushmaking, laundry work, carpet weaving, and tailoring are all in full swing. It is anticipated that each of these departments with, as a rule, only one instructor, will soon be capable of meeting the requirements of the whole institution. One of the most satisfactory departments is the garden, where fourteen boys, working with two men, have at the end of nine months cleared expenses and made a profit, although the land was previously in a neglected state. As these unfortunate individuals must be segregated, it is of great importance that they should contribute something to their own support; Sandwell has demonstrated the possibility of accomplishing this, even in aggravated cases, for it must be remembered that as

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a rule only those children are admitted to Sandwell who are unfit for the special schools that now exist in most of our large towns. Amusement has always been a recognised agent in training feeble minds, and bodies; due provision for simple entertainments should be made in every institution for defectives.

There are 32 feeble-minded or very backward children attending the Perth Schools.

The point generally urged by the headmasters was that of these 32 a proportion of one-third to one-half might be educated to become reputable and self-supporting citizens; and that this could be done by individualising the defective children in special classes or in a special school. Great pains and much time expended upon certain cases had resulted in marked improvement; but the conditions of school life do not permit of such time and attention as is requisite in justice to the schools generally. The result is that the more marked cases of defect are left to their fate, so long as they are amenable to discipline and well-behaved. The general

opinion/

opinion of the Headmasters is that these children are amenable to discipline, easily managed, and regular in attendance.

The results of my investigations lead me to agree with the suggestions made by various headmasters, that special classes in a central school should be formed for these feeble-minded children. I believe that, as at present cared for, these children are undesirable in the interests of the schools generally, and do not receive that individual attention which is necessary towards making them self-supporting citizens.

For practical purposes, it is desirable to recognise, that feeble-mindedness is congenital or acquired in early infancy; and it is further desirable to divide mentally defective children into the following classes:-

1. Idiots of low grade, who ought properly to be placed in idiot asylums. These are persons who cannot care for themselves, or protect themselves in the ordinary circumstances of life.
2. Imbeciles, who are less degraded mentally, but who are properly placed in special schools for imbecile children, being unable to reach a sufficiently high standard of mental developement to enable them to earn a living unaided.

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3. The feeble-minded of still higher grade, who are better retained in their own homes, and in special classes provided by the School Board, being eventually capable, with special assistance, of becoming self-supporting citizens.

4. Dull and backward children who may eventually develope into the average class of citizen, and who do not require segregation in special classes, but are more appropriately placed in the schools of their district.

In many cases the cause of the children being dull is some Surgical or Medical Defect which on being removed has resulted in marked improvement in the mental condition.

As shewing the close relationship of Disease as a predisposing cause of mental deficiency, the following figures are interesting.

I asked the headmasters to report on the mental capacity of all children attending school with the following results:-

MENTAL CAPACITY.

Number Reported on.	Normal.	Above Normal.	Below Normal.	Defective or Feeble-minded.
3,759	2,826	453	448	32

On looking up the schedules where I keep a record of the surgical and medical defects, I find the following striking results:-

Number of Surgical & Medical Defects on Schedules.	Number of defects belonging to "Normal" Mentally.	Number of defects belonging to "Above Normal"	Number of defects belonging to "Below Normal"	Number of defects belonging to "Defectives."
680 or 18% of the children examined.	480 or 17%	34 or 7½% (i.e. the greater the mental capacity the fewer the defects)	134 or 30%	32 or 100% (i.e. all the Defectives had one or more physical defects)

How many of the 448 children reported on as Below the Normal could have been brought to the normal had their defects been attended to in infancy, it is impossible to say. These figures prove how greatly the mind is influenced by the state of the body and the beneficial effects that may be expected from attention to surgical and Medical Defects in Infancy.

GENERAL REMARKS.

To improve the physique we must surround the child with the best conditions possible under the circumstances.

1. THE FOOD. This may be deficient in quantity, and I am sorry to say there are several extreme cases where the children are obviously suffering from starvation. But it may also be defective in quality, owing to ignorance on the part of the parents; and it is in these cases that improvement should be, and I am glad to say is being aimed at, by educating the elder girls on the care of infants and the general management of the home. Children require a sufficient supply of light nourishing food, and there is nothing better than fresh milk, eggs, and oatmeal, along with a little meat; but as these are expensive and troublesome to cook, their places are too often taken by tea and bread and butter from which very little nourishment is derived. A mid-day meal at the school would save such misery to many a weakly child.

During the year, with the assistance of the teachers, I had all the children in the primary schools weighed and measured, and, on comparing the results with the standard for the rest of the country, I found that the average for the Perth child was below the average as given by the Anthropometric Committee. I append a table showing the results of all the primary schools, from/

from which a fairly accurate idea can be arrived at as to the urgent necessity for improving the surroundings of the Perth child.

AGE	SEX	STANDARD AVERAGE in	PERTH AVERAGE in	+or− m.	STANDARD AVERAGE lbs.	PERTH AVERAGE. lbs.	+or− lbs
6 years	B.	44.0	43.1	-.9	44.4	42.7	-1.7
	G.	42.8	43.6	+.8	41.7	40.2	-1.5
7 "	B.	45.9	44.5	-1.4	49.7	46.3	-3.4
"	G.	44.4	44.2	-.2	47.5	46.1	-1.4
8 "	B.	47.0	46.5	-.5	54.9	51.5	-1.4
	G.	46.6	45.7	-.9	52.1	50.3	-1.8
9 "	B.	49.7	48.7	-1	60.4	56.6	-3.8
	G.	48.7	48.2	-.5	55.5	53.5	-2
10 "	B.	51.8	50.2	-1.6	67.5	61.0	-6.5
	G.	51.0	49.9	-1.1	62.0	58.8	-3.2
11 "	B.	53.5	53.0	-.5	72,0	66.5	-5.5
	G.	53.1	51.6	-1.5	68.1	63.3	-4.8
12 "	B.	54.9	54.0	-.9	76.7	69.5	-7.2
	G.	55.6	54.1	-1.5	76.4	67.5	-8.9
13 "	B.	56.9	55.5	-1.4	82.6	76.2	-6.4
	G.	57.7	54.4	-3.3 (all except one)	87.2	75.4 (all -)	-11.8

2. FRESH AIR. Windows should be made to open, and children should be warned against the pernicious habit of sleeping with their heads below the bed-clothes. Our cold and damp climate has a lot to answer for in preventing a good supply of fresh air.

3. CLOTHING. Light and warm clothing should be worn and flannel next the skin in winter is absolutely necessary.

4. CLEANLINESS. Too much stress cannot be put on the/

the importance of plenty of soap and water. The swimming baths should be taken advantage of more than they are, as, not only does it encourage cleanliness, but there is not a better form of exercise for increasing the size of the chest and muscles. From the following it will be seen that 66% of the children have clean hands, and it may be inferred that the rest of the body is in the same condition. In 16% there were nits present and in 18% there were lice present. Where the head was broken out the children were excluded from school and instructions given as to the best means of healing the sores. It is hoped in time to have every child in the school free from vermin.

CLEANLINESS OF HAIR.

TOTAL EXAMINED.	GOOD	MODERATE	BAD.
3819	2540 (66%)	628 (16%)	651 (18%)

5. TEETH. It is appaling to see the number of bad teeth and the absolute indifference occasioned by same. Out of 3677 children examined only 20% might be considered to have sound teeth. Of the rest, 55% had 3 to 6 bad teeth, and of the remaining 25% the teeth were in such a condition that they constituted an absolute danger to health. It will be necessary in the near future to provide a school dentist and to have a mouth drill. Not 10% of the primary school children know what a tooth brush is.

6. EYESIGHT. Not only is it necessary for the education of the child that the eyesight should be good, but many evils arise from defective vision, such as pain in the eyes, headache, and dizziness The eyesight of every child who was able to read was tested, with the result that 84% were found to be good, 10% moderate, and 6% bad. In bad cases notices were sent to parents advising that the child be taken to a specialist. Unfortunately this costs money, and it is a cause for regret that there is no eye dispensary in Perth where those unable to pay could be attended to free.

At present it is inadvisable that the "School Doctor" should test and prescribe glasses for the children.

In conclusion particular attention will have to

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be given to the following:-

1. Otorrhoea.
2. Granular Lids and all purulent discharges from the eyes.
3. Tuberculosis.
4. Enlarged Tonsils and Adenoids.
5. Skin Diseases. Ringworm. Favus. Impetigo Contagiosa. Scabies. &c.
6. Vermin & Filth on the body and clothing, also bad smelling breath & Bromidrosis.
7. Compulsory Notification of Measles, Mumps & Whooping cough.
8. Provision of School Nurses.
9. Cleansing of Schools & their Disinfection by means of a spray.
10. School Fittings.
11. Postures. (Physical Exercises)
12. First & Second aid to the injured, etc.,
13. Measurements:- Height, Weight & Chest.
14. School Closure & Holidays.

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I certify that the above has been composed by myself

Perth
26th April 1909.

Thesis
on
"Our Duty as a Nation
Towards the Children"